



# CORN INSECTS—BELOW GROUND

For safe and effective use of insecticides, always identify the problem correctly.



1. Corn rootworm adults (top-bottom: Northern, Western and Southern)



2. Corn rootworm larva



3. "Goose-neck" symptoms of corn rootworm infestation



4. Corn rootworm damage



5. Wireworm



6. White grub



7. Black cutworm



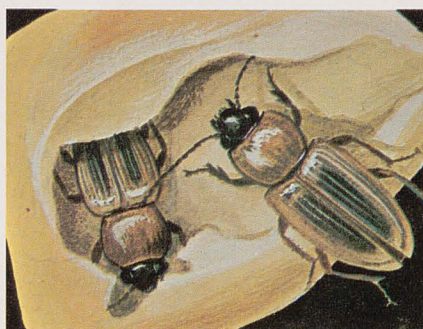
8. Corn root aphid



9. Grape colaspis and damage



10. Seed corn maggot



11. Seed corn beetle



12. Billbug (feeds on seedling corn plants below ground; holes in lower leaves of larger corn are evidence of this earlier feeding)





## CORN INSECTS—BELOW GROUND

1. **CORN ROOTWORM BEETLES**, *Diabrotica* spp. These are the adults of corn rootworms. The northern and western species are of most economic importance in Minnesota. These beetles begin to emerge about mid-July and may continue to be active well into fall, laying eggs in the soil of corn fields. The eggs of the northern and western species are laid in late summer and early fall; those of the southern corn rootworm are laid in the spring by overwintering or immigrant beetles. The beetles of all species have a wide host range and feed on pollen and foliage of many plants as well as silks of corn.

2. **CORN ROOTWORMS**. The larvae of the northern and western species hatch from overwintering eggs after about mid-June, feeding on and tunneling in young tender roots of corn.

3. and 4. **CORN ROOTWORM** feeding on corn roots causes lodging or "goosenecking" of the stalks. Severe feeding also reduces the ability of the roots to furnish the plant with water and nutrients. This results in stunting, reduced yields, and sometimes death of the plant.

5. **WIREWORM** (Various species). These hard-shelled larvae of "click" beetles often damage corn severely by feeding on the seed, roots, and underground parts of the stem or stalk. Early damage to seed usually appears as a poor stand. Infestations are most severe when corn follows sod or meadow in the rotation. Most species have life cycles which takes 3 to 5 years to complete.

6. **WHITE GRUB**, *Phyllophaga* spp. White grubs are the larvae of May beetles or "June bugs." Our common species have 3-year life cycles. Damage is usually most severe in corn following sod. Injury often appears as dead and dying plants in fairly large areas in the field.

7. **BLACK CUTWORM**, *Agrotis ypsilon* (Rott.). The black cutworm is one of the most destructive species of cutworms attacking corn. Plants are cut off at or below ground. Older plants may be stunted or killed by the cutworms tunneling into the base of the stalk. In dry weather these worms may be feeding underground so that control becomes very difficult with postemergence sprays.

8. **CORN ROOT APHID**, *Anuraphis maidiradicis* (Forbes). These powdery bluish-green aphids suck sap from corn roots. During periods of drought, especially in sandy soils or on knolls, plants may wilt and become yellow or reddish from the feeding. The aphids are dependent upon the corn field ants which take care of the aphids and feed on the honeydew the aphids secrete.

9. **GRAPE COLASPIS**, *Colaspis flava* (Say). Injury from this insect is rare in Minnesota. Infestations occur most frequently in corn planted on spring-plowed clover. Young plants may be stunted or killed early in the spring. The larvae look like very small white grubs.

10. **SEED CORN MAGGOTS**, *Hylemya platura* (Meigen). During cool, wet springs these maggots may severely reduce corn stands by destroying the seed. The whitish, legless maggots may be found tunneling in the seeds. The adults are small, grayish brown flies.

11. **SEED CORN BEETLES**, *Agonoderus lecontei* Chaudoir. These black and brown, very active ground beetles may attack corn seed in cool springs when the seed does not germinate shortly after planting. The symptoms in the field are the same as for seed corn maggot: a poor, incomplete stand.

12. **BILLBUG** (several species). Corn planted in low, poorly drained areas or adjacent to sloughs or bogs may be attacked early in the spring by these "snout beetles." Usual symptoms are rows of large oval holes across the lower leaves. Feeding may cause excessive suckering or even death of the attacked plants.

### Current Control Information

The information and color illustrations presented here are designed to help you correctly identify some of the more common insects that attack corn above ground. These insects and the problems they cause do not change, but methods of dealing with them do. Contact your local county agent or state extension entomologists for current methods of control.